

## Clinical Section

### A Clinic on Thoracic Pain

By

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In the daily practice of medicine one often encounters patients who complain of pain in the chest. Frequently they consult the physician in fear of cancer, tuberculosis and most commonly heart disease. As often as not the pain will be found to be due to some simple condition.

Pain in the chest may be caused by a wide variety of diseases and disorders. It may result from diseases of the heart or aorta, the lungs or pleura, the bony cage of the thorax or the spine itself. Such pain may even result from lesions below the diaphragm.

#### History

In a search for the cause of the pain the history is all important. Physical signs are often scanty. We must know the character of the pain, its severity, and the nature of its onset. Is it periodic or continuous? Where is it referred? What is its relation to effort, meals, respiration, or to movements of the spine or thoracic cage?

In speaking of "pain brought on by effort" one must realize that such a phrase means little. One must know the type and severity of the effort, i.e., walking, bending, running, etc. Does the pain begin immediately or is there a time lag? Is it relieved by rest?

The importance of such inquiry is well illustrated in the case of a man who complained of pain beneath the lower sternum "on exertion." The pain would last about the length of time it took to walk to his office. It later developed that the pain was not related to effort but to his meals. He always walked to work at the same time (about 15 minutes after meals). The man had a high gastric ulcer.

Remembering such points we may proceed to enumerate the more important causes of pain in the chest.

The following groups of causes have been modified from those of Spillane and White.

#### Cardiovascular Diseases and Disorders

- \*Angina Pectoris.
- Coronary Thrombosis.
- Pericarditis.
- \*Aneurysm Aortitis.
- \*Paroxysmal Tachycardia.
- \*Imaginary Heart Disease.
- \*Heartache in Mitral Disease.
- \*Anginoid Pain due to Anaemia, Thyroid Extract, etc.

#### Pulmonary Disease

- Pleurisy and Pneumonia.
- \*Bronchogenic Carcinoma.
- Pulmonary Infarction.
- Pneumothorax.
- Pleural Effusion.
- \*Tuberculosis.
- Spontaneous Mediastinal Emphysema.

#### Oesophageal Lesions

- \*Cardiospasm.
- \*Carcinoma.

#### Abdominal Diseases

- \*Peptic Ulcer.
- \*Gall Bladder Disease.
- \*Hiatus Hernia.
- Subphrenic Abscess.
- Liver Abscess.

#### Thoracic Wall, Spine or Nerves

- \*Herpes Zoster.
- \*Spinal Metastases.
- \*Spinal Injuries — compression fracture (late).
- \*Subacromial Bursitis.
- \*Fibrositis.
- \*Intercostal Neuralgia.
- \*Cervical Rib.
- \*Scalenus Anticus Syndrome.
- \*Tabes dorsalis.
- \*Arthritis of Spine — (osteo).

Such a comprehensive list serves to illustrate our diagnostic difficulties. In our discussion today we are not concerned with the severe incapacitating types of pain but with those which one meets in ordinary office or out-patient practice. In other words, the ambulant patient who has pain in the chest. Such causes have been marked with an asterisk on our list.

In this type of case our first duty is to rule out the condition most often in the patient's mind, namely, organic heart disease and particularly angina pectoris. And when I say rule it out I mean very definitely just that. There is no such thing as Pseudo Angina Pectoris. The patient either has the syndrome or he has not. Any doubt or hesitancy about this on the part of the physician may sow in the patient's mind the seeds of a most noxious weed, a cardiac neurosis.

#### Functional Cases

According to R. C. Cabot, most heart disease is imaginary. These victims of imaginary heart disease usually give themselves away. They are often young, nervous, high strung. They complain of vague praecordial pains and what they term "shortness of breath." The pains are usually in the left mammary region, occur at any time and have no constant relation to anything.

The breathlessness is usually of the sighing type. They find it difficult to take a deep breath but never actually "puff" on exertion.

The remaining symptoms of these people with the effort syndrome are simply those associated with Fear and Apprehension. Apart from a poor exercise response the physical examination is usually quite negative though occasionally such a syndrome may be superimposed upon an organic cardiac lesion.

### Angina Pectoris

How different the symptoms in a patient with true angina pectoris. He is of course older. You may in fact have difficulty in convincing him that his pain is of organic origin. He is that type as a rule.

The pain here is substernal, usually over the upper  $\frac{1}{3}$  of the sternum. It is constrictive in character, sometimes vice like. Most important, it occurs after definite exertion such as walking. The degree of effort and time of onset after effort begins are usually constant in a given case. The claudication time may shorten as the syndrome progresses. The pain may be referred to the jaw, the neck or to one or both arms. Physical examination may be quite negative. Hypertension cardiac enlargement and electrocardiograph changes may be present to aid in the diagnosis.

Remember that the pain is of short duration and is relieved by rest. Any such pain lasting more than 30 minutes is probably due to coronary thrombosis.

I have emphasized this familiar syndrome because it is the only pain of cardiac origin in office patients which is of the slightest significance.

Recently an analysis was made of 50 consecutive patients who had or were complaining of chest pain. Nearly all were suspected of having organic heart disease. As it turned out, only 27, a little more than 50%, actually had cardiac lesions.

These cases were all examined clinically and by fluoroscope and electrocardiograph. In some cases other x-ray examinations were made. The results are I think of some interest.

### Analysis of 50 Cases of Chest Pain

Coronary Thrombosis (late) .....	15
Angina Pectoris, with proven coronary sclerosis .....	7
Angina Pectoris, no proven coronary sclerosis .....	3
Gall bladder disease with anginal pain .....	2
Angina pectoris plus gall bladder disease .....	2
Anginal pain due to anaemia .....	2
Anginal pain due to thyroid extract .....	1
Chest pain due to neuritis, fibrositis and anxiety neurosis .....	7
Chest pain due to peptic ulcer .....	1
Chest pain due to hiatus hernia .....	1
Chest pain due to fracture of spine .....	1
Chest pain due to paroxysmal tachycardia (at onset) .....	3
Chest pain from mastitis .....	1
Chest pain due to osteoarthritis .....	1
Chest pain due to cardiospasm .....	1
Chest pain due to mitral stenosis .....	1
Pain due to cervical rib .....	1

N.B.— 50

- (1) Number of cases in which pain was actually due to organic heart disease ..... 27
- (2) Many of the cases with extra cardiac pain had anxiety neurosis.

Time will not permit me to analyze the various cases in which the pain in the chest was due to extra cardiac causes.

One case is, however, of considerable interest. This man, a farmer, was suspected of having angina pectoris. He had pain and breathlessness on "exertion." The exertion which induced this pain, however, was atypical. The symptoms appeared mostly upon bending and lifting. He gave a history of falling from his horse and injuring his neck nine months before. Fluoroscopic examination revealed a high right diaphragm which did not move with respiration. X-ray of the spine showed a crushing fracture of the 4th cervical vertebrae. This fracture had caught the phrenic nerve causing paralysis of the diaphragm. His symptoms were undoubtedly due to these two lesions. My time is up, but I think I have made my points. These are, firstly, that there is only one type of cardiac pain of importance in ambulant patients, namely, angina pectoris. Secondly, in many cases with chest pain thought to be due to cardiac disease the pain will be found to be due to lesions sometimes quite remote from that vital organ.

### Maldescent of the Testis

by

PETER BERBRAYER, M.D. (Man.), F.R.C.S. (Eng.)

*Late Senior Assistant Surgeon  
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The testis develops in the lumbar region of the abdomen, near the supra renal gland. During the early months of foetal life the testis descends to the internal abdominal ring. It passes through the rings during the 7th and 8th months and reaches the bottom of the scrotum just before birth. The descent of the testis through the inguinal canal to the scrotum is thought to be dependent upon the development of the gubernaculum. This structure, derived from mesoblast, is packed with proliferating cells which grow rapidly through the inguinal region. The gubernaculum (which means a rudder) was first described and so named by John Hunter, who evidently believed that its function was to guide the testis into the scrotum. There is no evidence to support the view that the gubernaculum exercises traction upon the testis; why and how the testis descends is still problematical.

The descent of the testis may be arrested at any stage of its journey and so the following varieties of *incompletely descended testis* are encountered:—

1. Abdominal.
2. Inguinal.
3. Subinguinal — superior scrotal.

Occasionally, the testis, having successfully navigated through the inguinal canal becomes misplaced outside the normal route and comes to rest, for example, in the perineum or in the superficial inguinal region. Such a testis is known as an *ectopic testis* and will be briefly discussed at the end of the paper.

### Clinical Appearance

The scrotum on the side of the undescended testis is frequently underdeveloped and smooth, the dartos muscle being absent. Sometimes, however, it is normal in appearance and only smaller in size from the absence of the testicle. In bilateral cases, both sides of the scrotum are small and empty and the penis underdeveloped. Occasionally there are other congenital concomittant malformations, such as hare lip, spina bifidia, etc.

It appears that the testis for its full development requires a temperature slightly below that of the abdominal cavity.

### Grass and Microscopic Changes

Until shortly before puberty, an imperfectly descended testis differs little if at all from its normally placed counterpart, and it contains spermatogonia and undifferentiated cells. As puberty is approached changes occur. Macroscopically, the most obvious is a lengthening of the mesorchium, the body of the testicle and epididymis becoming separated from one another. Microscopically, fibrosis occurs and there is an apparent and actual disappearance of tubules, while the spermatogonia remain quiescent. The interstitial cells of Leydig, responsible for the internal secretion of the testis, are apparently not influenced by the abnormal situation of the retained testis.

Therefore, until puberty, the undescended testis approximates to normal in structure, but subsequently, degeneration occurs. Hence operation for replacement of testicle into its normal position should be performed before puberty.

### Complications

The complications of incompletely descended testis may be listed as:—

1. Trauma — and tension of the cord.
2. Sterility.
3. Inflammation.
4. New growth.
5. Hernia — not really a complication but a concomittant.

**Trauma** is common in the high scrotal type and may cause much pain and lead to torsion when associated with hernia. Torsion of the cord is very likely to occur in the small scrotal or inguinal testis.

**Hernia** is a frequent concomittant of an imperfectly descended testis because the processus vaginalis in these cases is not completely obliterated. The hernia is sometimes of the interstitial type.

**Sterility** occurs in bilateral cases of imperfectly descended testis.

**Inflammation** occurs as in normally situated testis, for exmaple, as after venereal disease.

**New Growth** occasionally occurs. Statistics (Thomson — Walker) show that an imperfectly descended testis is probably a little more prone to new growth than a normally descended testis.

### Treatment

Treatment may be considered under the following three headings — Expectant, Hormonal or Operative.

**Expectant.**—No treatment until the 10th-12th year as the testes often descend at this period. Some observers have noted that 4 out of 5 cases will descend spontaneously at puberty.

**Hormonal.**—The normal development of the testes is dependent upon an adequate secretion of the gonadotrophic hormone of the Anterior Pituitary. Pregnancy urine is rich in gonadotrophic hormone and "pregnynl" has the most extensive use of several preparations.

In *unilateral cases*, the presence of a normal testis in one-half of the scrotum suggests that in these cases, lack of pituitary hormone cannot be the cause of non-descent and that the defect must be mechanical. Experience has shown that little hope of a satisfactory result from hormone therapy can be entertained with the unilateral cryptorchid. If descent occurs spontaneously or by hormone therapy it may be because the changes of puberty produce a general slackening of tissues in the inguinal and scrotal regions.

The type of case in which hormone treatment is most likely to be successful is in examples of *bilateral* inaldescent with subnormal genital development. Successful results can be anticipated in about one-third of the cases.

Hormone therapy is started at the age of 10-12 years. A course of "pregnynl" injections intramuscularly is recommended. The dose is 500 rat units twice weekly for three months.

Complications of hormone therapy are undue development of genitalia and undue sexual precocity. It is for that reason that hormone therapy is delayed until the prepuberty stage.

**Operation.**—This is indicated in unilateral cases and in bilateral cases where hormonal therapy has failed. The ideal age for operation is about 10-12 years. At this age too, the parts have developed sufficiently to render handling of the tissues easy. The operations which will be discussed are:—

1. Orchidopexy.
2. Abdominal replacement.
3. Orchiectomy.

*Orchidopexy* is indicated in the high scrotal and inguinal types. It should only be performed where it is thought that the testis is likely to function or where the patient is experiencing pain. In each case an incision is made as for herniotomy and any existing hernia is appropriately treated. The cord is then mobilized by freeing it, particularly the spermatic vessels, as far as possible from the surrounding tissues. The testis is then fixed in position by one of the following methods:—

1. Stitched to the bottom of the scrotum, this is known as the Bevan operation.
2. Passed through the scrotal septum into the





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\*The American Journal of Digestive Diseases, Feb. 1940, Vol. VII, No. 2, 60-63.  
\*\*The Journal of the American Medical Association Feb. 3, 1940, Vol. 114, No. 5, 404-408.

other side of the scrotum. It is retained in position by the valve-like action of the opening made in the septum. This is the so-called Ombrédanne operation. It is the method favoured at the Great Ormond Street Hospital, London.

3. Fixed to the thigh (Torek) by stitching Tunica Albuginea to fascia covering Adductor longus. The scrotal skin is then sutured to the margins of the skin incision which has been made in the thigh. The testis is left attached to the thigh for 3-6 months. It is then freed and found to stay in the scrotum. This operation gives satisfactory results.

**Abdominal Replacement.**—This operation is reserved for bilateral cases where it is found impossible to perform orchidopexy, owing to tension or severity of the operation. The testis is replaced inside the abdominal cavity by passing it through the internal ring and suturing it to the wall of the iliac fossa. It is then free from risk of trauma and torsion and it provides internal secretion.

**Orchidectomy.**—This is performed for torsion or new growth. It may also be performed in unilateral pain cases, as the organ is atrophied from repeated attacks of traumatic orchitis.

### Summary

In summarizing the treatment of Incompletely Descended Testis, the following principles emerge:—

1. The policy of awaiting spontaneous descent may be pursued until 10 years of age.
2. Hormonal therapy may be employed before operative treatment as a means of determining testes which will descend spontaneously. It should only be used in the immediate prepuberty period.
3. Operative treatment should be completed before puberty. The optimum period is between 10-12 years. Most consistent results are obtained by the septal transposition or by the Torek operation.

### Ectopic Testis

Unlike the incompletely descended testis, an ectopic or misplaced testis often develops fully. Its main hazard is that owing to its position it is liable to injury. The organ may be found in the pubic, perineal or superficial inguinal region, or even in Scarpa's triangle on the thigh. To explain the appearance of the testis in these anomalous positions, C. B. Lockwood, a surgeon of St. Bartholomew's Hospital, advanced the ingenious theory of many gubernacular tails. His theory postulates that in ectopic testis the main scrotal tail becomes broken. As a consequence, the testis, adrift from its usual moorings, follows one of the accessory rudders.

The treatment indicated is orchidopexy.

## Personal Notes and Social News

Conducted by Gerda Fremming, M.D.

Dr. Allan Douglas Bracken, of Moose Jaw, Sask., son of Hon. and Mrs. John Blacken, was united in marriage to Rosemary, second daughter of Mr. and Mrs. H. C. McWilliams, in St. Stephen's-Broadway United Church, Saturday, November 9th, 1940. Dr. and Mrs. Bracken left by motor for Eastern Canada and New York City.

♡ ♡ ♡

Dr. Mary Crawford entertained at tea at the Lodge, Hargrave street, in honor of Dr. Nan Norrington, who has recently returned from England.

♡ ♡ ♡

Dr. and Mrs. J. O. S. Sigurdsson, of Manitou, Man., left for West Fargo, N.D., where they will reside in the future.

♡ ♡ ♡

Dr. and Mrs. Wiebe, of Winkler, were recent guests of Mr. and Mrs. Reg. Follett, of Manitou.

♡ ♡ ♡

Dr. E. H. Alexander, after a recent illness, left November 19th for Harrison Hot Springs, B.C., to convalesce. A short visit to Calgary is also planned. We extend our best wishes for a speedy recovery.

♡ ♡ ♡

Dr. Robert Inglis, of Estevan, Sask., son of Mr. Robert Inglis, of Portage la Prairie, Man., was married November 23rd to Dorreene Louise, second daughter of Mrs. McGuinness, of Brandon, and the late W. F. McGuinness.

♡ ♡ ♡

Dr. Roper Cadham ('38) who was pursuing a course of post-graduate study at the Banting Institute, Toronto, leading to the Diploma in Public Health, has recently enlisted as a medical officer in the R.C.A.F.

♡ ♡ ♡

Dr. Rondeau Jarrot ('36) has recently returned from Great Britain, where he was doing post-graduate work.

♡ ♡ ♡

Dr. H. O. Little ('29) is practising ophthalmology in New York City. He is associated with Dr. David H. Webster.

♡ ♡ ♡

Dr. and Mrs. John Matheson, of Brandon, Man., were week-end guests of Mrs. W. A. Matheson, Wellington Crescent.

♡ ♡ ♡

Dr. D. M. Bruser ('36) is in practice at Weyburn, Sask.

♡ ♡ ♡

Dr. Kenneth Lemon ('39) is practising at Pugwash, Nova Scotia.

Dr. Robert M. Ramsay ('37) is continuing his post-graduate studies in ophthalmology at the University of Minnesota and at the Charles T. Miller Hospital, St. Paul.

♡ ♡ ♡

Dr. Pearson Griggs ('26), following a post-graduate course in surgery in England, has joined the British medical services in India where his brother, Dr. Frank Griggs, is similarly engaged.

♡ ♡ ♡

Dr. and Mrs. H. Matas, of Fort McMurray, Alta., are visiting Winnipeg and are the guests of Mrs. Matas' parents.

♡ ♡ ♡

Dr. J. J. Leishman's (Fort Francis, Ont.) engagement to Freda Eleanor, daughter of Mr. and Mrs. C. O. Hyndman, of Cardale, Man., has been announced. The wedding to take place November 30th.

♡ ♡ ♡

Dr. and Mrs. A. T. Gowron (nee Doris McBride), of 347 Scotia street, are receiving congratulations on the birth of a son at St. Boniface Hospital, November 22nd.

♡ ♡ ♡

Dr. J. D. Munroe has recently been awarded the Diploma in Tropical Medicine from the University of Liverpool. Before returning to his post in India with the British Medical Service Dr. Munroe hopes to do further work at that University.

♡ ♡ ♡

Dr. and Mrs. J. S. Poole, of Neepawa, Man., are residing at the Fort Garry Hotel, Winnipeg, during the session of the Manitoba Legislature.

♡ ♡ ♡

A local physician was so intrigued by this note he received from a patient that he suggested it be published.

"The customer is always right, big boy, just keep your shirt on. You are being paid faster than my personal opinion warrants towards you, however, you are being paid by and by, big boy, mostly by and by. I do not refuse what I am supposed to owe you, you are being paid, so do not get excited and keep your shirt on big boy."

♡ ♡ ♡

The *Review* is always glad to receive items of a personal or social nature for this page; however, as the *Review* goes to press a week in advance of publication date, contributions must be in by the 20th of the month preceding date of issue.

# The **VITAMIN B** Complex

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## Editorials and Association Notes

### The Manitoba Medical Review

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*Editorial or other opinion expressed in this Review is not necessarily  
sanctioned by the Manitoba Medical Association*

## Experimental Results in Chemotherapy of Tuberculosis

Many investigators have shown that Sulphanilamide, Sulphapyridine and Sulphathiazol have no effect on the course of tuberculosis in guinea pigs.

At the Baltimore meeting of the American Chemical Society in April, 1939, Dr. M. L. Crossley, of the Calco Chemical Company, reported that guinea pigs given tubercle bacilli and then N<sup>1</sup> Dodecanoylsulphanilamide developed only mild local infections whereas the controls all died. The idea behind this therapy was that sulphanilamide combined with a fat might have a better chance to penetrate the fatty envelope of the tubercle bacillus. Follow-up reports on the investigation are lacking.

In the Proceedings of the Mayo Clinic October 30th, 1940, p. 695, Feldman, Hinshaw and Moses report the striking results of Promin (Sodium salt of P.P<sup>1</sup> Diamino—Diphenyl—Sulphone—N.N<sup>1</sup>—Dextrose Sulphonate) on guinea pig tuberculosis. The 30 treated pigs were each given about 300 mg. of the drug per day in their food. A few days later they and 20 controls were subcutaneously infected with tubercle bacilli. In 84 days all the controls were dead and 24 of the 30 treated pigs were still alive. In 164 days the 13 survivors of the treated group were killed. At autopsy all of the controls showed tuberculosis of the spleen,

but 62% of the treated pigs showed spleens histologically free of tuberculosis. Some of the deaths in both series were due to gastro intestinal lesions from an inadequate diet. No toxic symptoms due to Promin were noted.

The administration of the drug before the tubercle bacilli were injected makes this experiment quite different from the ordinary methods of therapeutics, but, considering the susceptibility of the guinea pig to the infection, results such as these are encouraging.

It need hardly be emphasized that this is an artificial laboratory experiment, as yet uncorroborated. However, it suggests to the imagination the possibility of a successful chemotherapeutic attack on human tuberculosis. To medicate the Biblical phrase, we could beat our sanatoria into asylums, and our chest physicians into alienists.

### ABSTRACT

#### Soluseptasine (M & B 137) in Meningococcal Meningitis

(*British Medical Journal* 1940, vol. ii, p. 439, Oct. 5)

124 Aldershot cases are reported by Lieut.-Col. R. W. Cushing, with a mortality rate of 3.2%. Col. Cushing attributes this remarkable good result to the use of Soluseptasine, a sulphanilamide with an additional benzyl group, which very greatly reduces its toxicity. 10 cc. of 10% soluseptasine intravenously or intramuscularly, about every 6 hours, has revived even pulseless moribund patients. No toxic symptoms were encountered. Once the diagnosis has been made, no further lumbar punctures are done, unless signs of increased intracranial pressure occur. —F.G.A.

### Recruit Examination Errors

Aside from the widely-publicized tendency of doctors to omit the "Notice of Call Serial Number" from the physical examination forms of recruits, the Department of National War Services views with regret the bad handwriting of some physicians, and the inaccurate categorizing. It is suggested that examiners study more closely "Classification by Categories" in the booklet "Physical Standards and Instructions for the Medical Examination of Recruits."

### Free Booklet on Treatment of Gas Casualties

A booklet issued by the British Air Raid Precautions Department on the medical treatment of gas casualties will be sent free to any doctor on application to the manufacturers of Dettol. Write direct to Reckitt & Coleman (Canada) Limited, 1002 Amherst Street, Montreal, Que.

## 1940 Income Tax Regulations

A letter issued from the Commissioner of Income Tax in September, 1940, states that, beginning January 1st, 1941, the rate allowed doctors for the operation of their cars for business purposes shall be reduced to 4½ cents per mile, also that for 1939 and subsequent years professional men under salary will not be allowed deductions in respect to the cost of operating motor cars or depreciation thereon.

Extracts from a Eulogy on the passing of Wor. Bro. Dr. A. N. MacLeod, by a brother practitioner (Dr. J. N. Hutchison) at Northern Light Lodge.

"Once more the clock of time has struck the hour and the earthly school of life is out forever for another of our beloved brethren. It is my sad, but pleasurable honour to be permitted to refer to the recent passing of Dr. A. N. MacLeod, a member held in high esteem in this Lodge.

Just forty-nine years ago it was my pleasure to be first introduced to 'Sandy' MacLeod at the medical college in this City. Since these days of the long ago, I have known him intimately.

Dr. MacLeod was a quiet man, a courtly gentleman, a philosopher and a man whose character was built of nuggets of the pure gold of Honesty, High Thinking, Geniality and Friendship and a reverence for the great things of Life—a man who feared God and who walked humbly before his Maker.

For over forty years he lived in the trenches of medical practice; in constant fight against the last great enemy—Death—and was happy in seeing the smile of health coming back to the pallid cheek, strength to the tired limbs and brightness to the dimming eye.

I know how his soul was gladdened by these victories.

Dr. MacLeod was a real 'Dr. MacClure' and his life was rich in the love of his friends, of whom I had the honour to be one.

Yes, we have lost another kindly soul from our ranks.

'Home is the hunter, home from the hill,  
And the sailor home from the sea.'

He has laid aside his armour and, weary with the long struggle, he has passed on to the Land of Understanding, where his tired feet will no more be weary, and where a new life of Joy will begin.

We join with his dear ones in paying tribute to his honoured name, and assure them of our deepest love and sympathy in this hour of their bereavement.

And, as we thus join in loving remembrance, may a new quickening inspire each of us to emulate the fine and noble life of our departed friend."

Winnipeg,  
October 17th, 1940.

## MEDICAL PRACTICE AVAILABLE

The Rural Municipality of Silver Creek, Man., has a vacancy for a Municipal Doctor. Salary of \$3,500 to \$4,000. See advertisement on page 232 for further particulars.

## OBITUARY

### DR. FRANK WALTER SHAW

Dr. Frank Walter Shaw died at his home in Gimli, Manitoba, on October 26th, after a long illness. Born at Carberry, Manitoba, in 1888, he taught school in Alberta, Saskatchewan and Manitoba, and graduated first in Pharmacy and then in Medicine (1920) from the University of Manitoba. After one year's practice at Elphinstone, Man., and Delburne, Alta., he moved to Gimli in 1923 and practised there until his death. He took an active interest in community affairs and was a member of the Gimli Curling Club. He is survived by his widow, a graduate from the Winnipeg General Hospital School of Nurses, a son and a daughter.

### Brandon and District Medical Association Meeting November 27th, 1940

The above Association held a meeting at the Brandon Mental Hospital (Receiving Unit), Wednesday afternoon at 2.45 o'clock, November 27th, 1940.

#### Programme

Chairman—Dr. D. L. Johnson, President of the Association.

1. Clinico-Pathological Conference.  
Dr. J. D. Adamson, Professor of Medicine, University of Manitoba.
2. A Review of Psychiatric Out-Patient Examinations.  
Dr. G. A. Little, Mental Hospital Staff.
3. Disease Prevention in Infancy and Early Childhood.  
Dr. C. R. Donovan, Winnipeg.
4. Spontaneous Cardiac Rupture.  
Dr. I. J. Simburg, Mental Hospital Staff.

Mrs. T. A. Pincock and Mrs. D. L. Johnson entertained the ladies at Mrs. Pincock's home for tea. Dinner was served at 6.30 p.m. in the Nurses' Residence.

### The School-Child's Breakfast

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum (Mead's Cereal cooked and dried). Six times richer than fluid milk in calcium, ten times higher than spinach in iron, containing vitamins B<sub>1</sub> and G, Pablum furnishes protective factors especially needed by the school-child. The ease with which Pablum can be prepared enlists the mother's co-operation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature. Mead Johnson & Company, Evansville, Indiana, U.S.A.

—Adv.





<b>HYPOBYN</b> E.B.S.	<b>C.C.T. No. 466</b> <b>MINEROVITE</b> E.B.S.	<b>C.T. No. 501</b> <b>NEUROVIT</b> E.B.S.
Each fluid ounce contains: Calcium Hypophosphite - 12 grs. Sodium Hypophosphite - 8 grs. Iron Hypophosphite 2 grs. Manganese Hypophosphite - 1 gr. Potassium Hypophosphite - 1 gr. Quinine Hypophosphite 1/2 gr. Strychnine Hypophosphite - 1/16 gr. With Vitamin A—4900 int. units Vitamin D— 800 int. units Malt 25% An excellent reconstructive and nutritive tonic. Dose—One-half to two fluid drachms.	Each tablet contains: 1500 international units of Vitamin A 60 international units of Vitamin B <sub>1</sub> 35 micrograms Vitamin B <sub>2</sub> 200 international units of Vitamin C 400 international units of Vitamin D 20 units Vitamin K 5 mgm. Nicotinic Acid and Vitamin E, combined with salts of the following mineral elements: Iron, manganese, copper, calcium and phosphorus. Dose—Three or four tablets daily.	Each tablet contains: 100 international units of Vitamin B <sub>1</sub> 3 mg. Nicotinic Acid 0.1 mg. Riboflavin Vitamin B <sub>1</sub> is the anti-neuritic vitamin. Nicotinic Acid is a preventive and corrective of sub-clinical pellagra, and Riboflavin is essential to carbohydrate metabolism and muscle tonicity. Dose—One tablet three times a day.

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# Conquest of STAPHYLOCOCCUS SEPTICEMIA

**G**ENERAL INVASION of the body by staphylococcus organisms has always been a dreaded, highly fatal condition.

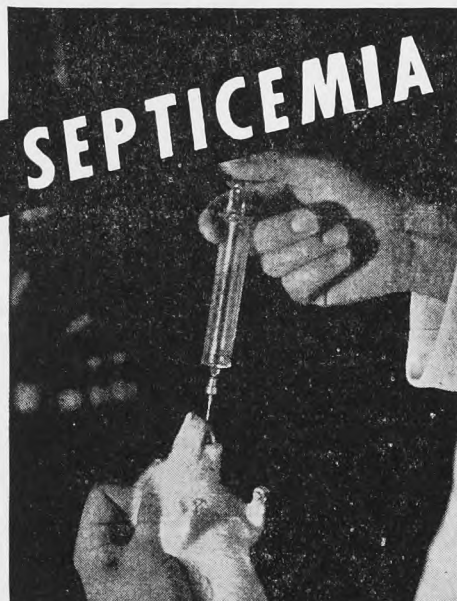
With the new chemotherapeutic agent, Sulfathiazole, the mortality rate has been strikingly reduced. Thus, in a series of fifteen cases of staphylococcus septicemia reported recently, all of the patients recovered.\*

Numerous cases of pneumococcus pneumonia have also responded with dramatic promptness to Sulfathiazole.

The effect against other pathogenic organisms, including those commonly found in urinary tract disease, is likewise very impressive. However, the general use of Sulfathiazole in such infections should await additional published reports of clinical trials now being made.

\*Spink, W. W., and Hansen, A. E.: Sulfathiazole, Clinical Evaluation. J.A.M.A., 115:840, Sept. 7, 1940.

*Write for literature which discusses the indications, dosage and possible side effects of Sulfathiazole.*

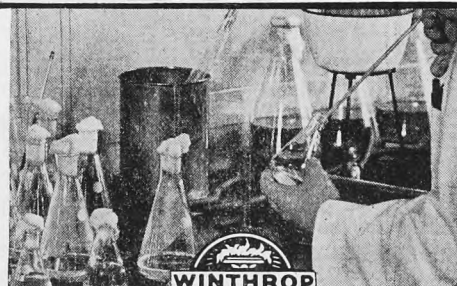


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## Department of Health and Public Welfare

### SWINE ERYSIPELAS AND ERYSIPELOID IN MAN

Swine erysipelas has been known for long periods in many parts of the world. It was first definitely demonstrated in the United States in 1920<sup>1</sup> and since 1930 has appeared in practically all states.<sup>2</sup> It was first proved to exist in Western Canada five or six years ago, and is known to have been prevalent in Manitoba during the past few months.<sup>3</sup> For this reason a few notes on the disease in the animal and in man is of interest.

#### The Infection in Swine

Swine erysipelas is an infectious disease caused by an organism called *erysipelotheirus rhusiopathiae*. The organism has been found in a considerable assortment of animal species, either as a harmless parasite or as a cause of disease, and its dissemination is extraordinary. It is capable of retaining its viability and virulence for months. A temperature of 70° C. takes several minutes to destroy it.<sup>4</sup> Pigs between three months and one year old are especially susceptible, pigeons and white mice are highly susceptible to artificial infection, and rabbits and guinea pigs considerably less. Field mice are immune. Cattle and sheep may also become infected.

#### Forms.

(a) Hyper-acute form which kills pigs so quickly that there is almost no time for lesions to develop.

(b) Acute.—There is reddish purple discoloration of the skin (led to the term "diamond skin" disease) these spots are highly variable as to size, shape and location. The cutaneous manifestations constitute most of the symptomatology in some cases, in others there is an acute generalized infection when the animal refuses feed, breathes heavily, vomits and may appear lame. The post-mortem may show redness of the superficial lymph glands, usually the spleen is enlarged, softened and contains darkened hemorrhagic areas. The kidney is dark red but never mottled. The lungs have a peculiar appearance, the interlobar tissue being definitely red. There is commonly a diffuse enteritis which shows on the outside of the intestines as a definite redness and sometimes the stomach is startlingly red.

(c) Chronic.—This form of the disease shows itself mainly as arthritis, the affected pigs showing swollen knuckles or hocks, they squeal when made to move and fail to gain weight. It may be mistaken for rickets. Post-mortem examination reveals typical changes within the infected joints. Vegetations on the heart valves are apparently common.

#### Treatment.

Treatment is by the liberal use of antiserum.

#### Human Infection

Development of the disease in man from infection through the gastro intestinal tract appears very rare. Only one reference to such a possibility was found. As a cutaneous infection it is relatively common among certain workers and is known as erysipeloid. It may be expressed as acute septicaemia with a fatal outcome or as a generalized cutaneous infection with arthritic and constitutional symptoms.

Joseph Klauder in a review of one hundred cases in the Journal of the American Medical Association<sup>5</sup> states that the localized cutaneous form of the disease occurs at the site of epidermal defect, usually the hands, and it is of variable severity with or without localized arthritic or constitutional symptoms.

#### Symptoms.

The first symptom is pain at the site of inoculation and is followed by swelling and erythema. The most distinctive feature of the disease, of considerable diagnostic import, is the purplish red color of the erythema. The erythema slowly progresses, producing another distinctive feature, a sharply defined, slightly elevated zone which extends peripherally as the central portion fades away. The involved area is swollen and tense. Another characteristic of the disease is its migratory nature; new purplish red patches appear at remote areas. The disease may completely disappear at the areas first involved at the time other areas are affected, it involutes without desquamation.

The appearance is not that of pyogenic infection with which the condition is frequently confused. The color of the erythema is different. There is no pitting on pressure and suppuration never occurs. Pain is the most conspicuous subjective symptom, throbbing and burning in character, often preventing sleep.

Adenitis, with or without lymphangitis, occurred in twenty-eight of the cases. Six patients had temperatures from 100 to 102 with constitutional symptoms.

#### Incubation Period.

Usually from one to three days.

#### Source of Infection.

Fifty-eight of these cases were among workers in an abattoir and included those working in almost all divisions of the plant. Sixteen were from the handling of fish. (The most virulent types of infection appear to come from this channel). Six veterinary students had been dissecting a horse. Seven cases injured while handling fertilizer, tallow, etc. Three butchers, two bakers and eight other cases, each under a different circumstance.

#### Treatment.

Rest and heat are important. Heat and dry dressings and erythema doses of Ultra Violet Rays from water-cooled quartz lamp have been tried. Immune serum was used in the severe cases. Some cases appear to run a self-limited course. Duration of majority of cases is about three weeks.

The Canadian Journal of Comparative Medicine, October, 1940, reports under the title "Swine Erysipelas in Man" a case occurring in a veterinarian, abstracted as follows:

"August of this year Dr. M. consulted the Bacteriology Department at the Ontario Veterinary College regarding what appeared to be an infection in his right hand. He had autopsied a pig. At the time he performed the autopsy there was a small cut on the index finger of his right hand. Approximately twenty-four hours later the finger began to swell, the swelling being accompanied by considerable pain. The next day he consulted his physician who diagnosed infection and prescribed local treatment as well as the administration of sulphanilamide. In spite of this however, the swelling, and particularly the pain, continued to increase.

"At the time he presented himself to us, swelling was practically confined to the finger. There was no break in the skin but where the cut had apparently been, and had healed, there was a dark red area surrounded by a bright red margin. There was no swelling or pain in the neighboring glands. There was, however, a great deal of pain in the affected finger and hand so that Dr. M. could hardly bear to have it touched.



"We contented ourselves with drawing five c.c. of blood from medial vein. A portion of this was used for a rapid agglutination test using stained antigen obtained from Dr. Schvening, Chief of the United States Bureau of Animal Husbandry. The test was rapidly and very strongly positive. In order to be sure that normal agglutinins did not occur to any degree we tested blood from several other individuals by the same method but obtained no reactions, not even slight ones. Dr. M. attempted to obtain antiserum but as none for human use was available in Canada it was necessary to send to Kansas City for it. By that time (7 days after infection) the swelling had extended to the first three fingers of the hand and both the back and major part of the palm of the hand were swollen. Serum was administered in 10 c.c. doses intramuscularly for four days. This checked the progress of the inflammation and relieved the pain. The swelling, however, did not entirely disappear for some time."

—C.R.D.

#### References

1. Journal American Medical Association, April 11th, 1931, page 1205.
2. Journal American Medical Association October 8th, 1938, page 1345.
3. Proceedings—Veterinary Association, Manitoba, February 9th, 1940.
4. Veterinary Pathology and Bacteriology—S. H. Gaiger—80 dairies.
5. Journal American Medical Association October 8th, 1933, page 1345.

### COMMUNICABLE DISEASES REPORTED

#### Urban and Rural - September 10th - October 7th

**Measles:** Total 147—Dauphin Town 83, Cypress North 15, Brandon 10, Dauphin Rural 9, Wawanesa 7, Tuxedo 4, Winnipeg 3, Hanover 2, Whitehead 1, Gilbert Plains Rural 1, St. James 1, St. Vital 1 (Late Reported: Dauphin Town 6, Brandon 2, Gimli Village 1, Boulton 1).

**Whooping Cough:** Total 124—Winnipeg 43, Kildonan West 10, St. Boniface 6, Siglunes 5, Greta 3, Albert 2, La Broquerie 2, Lansdowne 2, Montcalm 2, St. James 2, Saskatchewan 2, Tache 2, Woodlands 1, Arthur 1, Binscarth 1, Brokenhead 1, Dauphin Town 1, Hanover 1, Morris Town 1 (Late Reported: Brandon 8, Unorganized 8, Albert 4, Edward 3, Portage Rural 3, Lansdowne 3, Eriksdale 2, Siglunes 1, Brenda 1, Flin Flon 1, Harrison 1, La Broquerie 1).

**Tuberculosis:** Total 103—Unorganized 20, Winnipeg 11, Brandon 9, St. James 3, Bifrost 3, Armstrong 2, Cartier 2, Dauphin Town 2, Dauphin Rural 2, Ellice 2, Neepawa 2, North Norfolk 2, Rockwood 2, St. Clements 2, Selkirk 2, Archie 1, Birtle Rural 1, Brokenhead 1, Clanwilliam 1, Cypress South 1, Daly 1, Flin Flon 1, Fort Garry 1, Gilbert Plains Town 1, Gimli Village 1, Glenwood 1, Grandview Town 1, Grey 1, Hamiota Rural 1, Hamiota Village 1, Harrison 1, Kildonan East 1, Lac du Bonnet 1, Lakeview 1, Lorne 1, Morton 1, Portage City 1, Portage Rural 1, Rhineland 1, Roland 1, Russell Rural 1, St. Andrews 1, St. Boniface 1, St. Laurent 1, Shoal Lake Town 1, Silver Creek 1, Swan River Town 1, The Pas 1, Victoria 1, Whitehead 1, Woodlands 1, Woodworth 1.

**Chickenpox:** Total 77—Winnipeg 27, Flin Flon 13, Argyle 9, Rockwood 2, Portage Rural 1, St. James 1, St. Francois Xavier 1, Unorganized 1 (Late Reported: Unorganized 22).

**Scarlet Fever:** Total 53—Winnipeg 20, Dauphin Town 9, St. Vital 3, Bifrost 3, Armstrong 2, Portage City 2, St. Boniface 2, Unorganized 1, Brandon 1, Dauphin Rural 1, Lansdowne 1, Ritchot 1, Russell Rural 1 (Late Reported: Dauphin Rural 4, Gilbert Plains Rural 1, Strathclair 1).

**Mumps:** Total 39—Winnipeg 21, St. Boniface 16 (Late Reported: St. Boniface 2).

**Diphtheria:** Total 17—Winnipeg 13, St. Clements 2, St. James 1, Strathclair 1.

**Typhoid Fever:** Total 10—Stanley 5, Hanover 1, St. Francois Xavier 1, The Pas 1, Unorganized Territory 1 (Late Reported: Transcona 1).

**Pneumonia Lobar:** Total 6—Hamiota Rural 1, McCreary 1, Ste. Rose Rural 1, Unorganized 1 (Late Reported: North Kildonan 1, La Broquerie 1).

**Erysipelas:** Total 3—Ste. Rose Village 1, St. Vital 1, Winnipeg 1.

**Anterior Poliomyelitis:** Total 2—Hamiota Village 1, Minto 1.

**Meningococcal Meningitis:** Total 2—St. James 1, Tuxedo 1.

**Influenza:** Total 2—Hamiota Rural 2.

**Encephalitis:** Total 1—Napinka 1.

**Trachoma:** Total 1—(Late Reported: Hanover 1).

**German Measles:** Total 1—Brandon 1.

**Treaty Indians:** Total 45—Tuberculosis 35, Diphtheria 3, Influenza 3, Measles 2, Whooping Cough 2.

**Veneral Disease:** Total 189—Gonorrhoea 139, Syphilis 50.

### DEATHS FROM COMMUNICABLE DISEASES

**RURAL**—Cancer 23, Tuberculosis 8, Pneumonia Lobar 7, Pneumonia (other forms) 9, Influenza 3, Syphilis 3, Erysipelas 1, Lethargic Encephalitis 1, Poliomyelitis 1, Scarlet Fever 1, Whooping Cough 1, other deaths under one year 22, other deaths over one year 160, Stillbirths 18. Total 258.

**URBAN**—Cancer 46, Pneumonia Lobar 3, Pneumonia (other forms) 4, Tuberculosis 3, Lethargic Encephalitis 1, Poliomyelitis 1, Syphilis 1, Typhoid Fever 1, other deaths under one year 13, other deaths over one year 153, Stillbirths 13. Total 239.

**INDIAN**—Tuberculosis 19, Influenza 6, Pneumonia 6, other deaths under one year 7, other deaths over one year 6, Stillbirths 2. Total 46.

### SQUIBBS OFFERS PYRIDOXINE IN MICROCAPS AND SOLUTION

Pyridoxine Hydrochloride (the hydrochloride of pure, synthetic vitamin B<sub>6</sub>) is now being supplied by E. R. Squibb & Sons, Toronto, in two forms—Microcaps (miniature capsules) for oral administration containing 1 mg. and 10 mg. each, and aqueous Solution for parenteral administration, containing 25 mg. per cc.

Indications for Pyridoxine therapy are not well established as yet, but they include vitamin B<sub>6</sub> deficiency conditions complicating pellagra, beri-beri, and other nutritional deficiency states. Limited clinical investigation suggests the use of Pyridoxine in the treatment of paralysis agitans (Parkinson's syndrome), myasthenia gravis and pseudohypertrophic muscular dystrophy.

Solution Pyridoxine Hydrochloride Squibb may be given by the subcutaneous, intramuscular or intravenous route; the Microcaps are administered orally. The suggested prophylactic dose is 1 to 5 milligrams daily by mouth. The therapeutic dose suggested is 10 to 50 milligrams daily, preferably by a parenteral route.

One mg. Microcaps are supplied in vials of 50, and 10 mg. in boxes of 20. The solution comes in 5 cc. rubber-capped vials containing 25 mg. Pyridoxine Hydrochloride per 1 cc. preserved by 0.5 per cent. chlorobutanol.

—Adv.